

# Recommendations for the Massachusetts Health Care Quality and Cost Council's Three Year Reporting Plan

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# EXECUTIVE SUMMARY

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This report describes the work completed under the Massachusetts Health Care Quality and Cost Council (the Council, QCC) contract with Massachusetts Health Quality Partners (MHQP) and its partner, Milliman, Inc. The purpose of the report is to produce a reporting plan for quality and cost measures to be calculated and displayed on the QCC's consumer website, [www.MyHealthCareOptions.org](http://www.MyHealthCareOptions.org) for calendar years 2010, 2011, 2012 and beyond. This report covers the following areas that were investigated for the reporting plan:

- Care settings
- Clinical conditions
- Quality measures, including measures of process, outcome, and structure as well as patient safety and patients' experience of care
- Cost, volume and utilization measures
- Reporting frequency for each measure type
- Benchmarks for each measure type that would allow for valid comparisons among entities
- Reporting thresholds for each measure type that would ensure sufficient providers were included

In addition, this report details the complexity of creating measures using a multi-source claims database and the feasibility of incorporating racial, ethnic and language disparities within the measurement categories. Finally, we recommend reports that could be made available to stakeholders other than consumers such as providers, payers and policy makers.

To establish priorities for the reporting plan, we recommended that the Council approve criteria for selecting settings, conditions and measures for each year. The Council approved this focus and we established the following criteria to determine the conditions to include in 2010 and the settings, conditions and measures for future years:

- National consensus on importance
- Conditions where consumers may seek out information
- Conditions with multiple treatment options
- Conditions that are high volume or high cost
- Conditions with quality measures already publicly reported, and ideally with National Quality Forum (NQF) endorsement, requiring minimal calculation

The recommendations described below are based on an extensive review of the national measurement agenda and measurement sets, as well as a review of publicly reported measures and calculation methodologies, and discussions with the QCC committees on patient safety, end-of-life issues and care transitions.

## 2010 Reporting Plan

For 2010 we recommend refreshing the hospital inpatient and outpatient care measures already on the MyHealthCareOptions website, and adding physician group ambulatory care measures. We made the recommendation to limit the number of settings reported on the website in 2010 given the resources likely to be available to the Council and the significant work needed to prepare the multi-plan claims database and redesign the website.

Based on the selection criteria described in the prior section, the following list of clinical conditions was prioritized for reporting within the hospital and physician group settings:

- Bone and joint conditions: hip and knee replacement, and lower back pain
- Chronic Diseases: diabetes, cardiovascular disease, and respiratory disease
- Screening for cancer of the breast, cervix, colon and rectum
- Perinatal Care Services

### *Inpatient care measurement*

**For Quality measures of inpatient care**, we recommend the Council continue to use many of the already publicly reported sources they have utilized for the measures currently displayed, including:

- The Centers for Medicare and Medicaid Services (CMS) process measures from their website, HospitalCompare,
- The Agency for Healthcare Research and Quality (AHRQ) and Mass-DAC mortality measures
- The Leapfrog Group safety measures
- The CMS Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) results for patient experience of care

In addition we recommend that the Council add the following quality measures:

- The Surgical Care Infection Prevention measures from The Joint Commission (TJC) website, QualityCheck. These results are condition-specific and will be more useful to consumers than those from CMS, which are for surgical care in general.
- The Serious Reportable Events (SREs) currently reported by the Massachusetts Department of Public Health (DPH). We recommend that these new patient safety measures be reported as rates rather than counts so that the extent of the problem will be more apparent.
- The Hospital Acquired Infections (HAIs) that will be available from DPH in 2010. Some HAIs will be best reported in the patient safety section but others will be procedure-specific, e.g. hip and knee replacement surgical site infection rates, and can be placed with other condition-specific measures.

For **volume and utilization measures**, we recommend that the Council continue to report all volume information it currently has on the website, and add maternity utilization rates for normal deliveries, Caesarean births and vaginal births after a Caesarean.

For **costs** we recommend that the Council continue to calculate inpatient costs using the APR-DRGs for priority conditions and others already on the consumer website. We also recommend that the Council investigate adding professional costs for procedural and surgical conditions to the facility costs for inpatient care in order to provide the total cost of the hospital stay.

### *Ambulatory care measurement*

Calculation of both quality and cost measures for ambulatory care presents numerous methodological challenges:

- Physicians must be linked across several health plans.
- Patients must be attributed to physicians who will be held accountable for the quality and cost of care provided to them.
- In most cases, physicians must be assigned to medical groups so that there can be reliable reporting of results.

There are a variety of public and proprietary methods and algorithms that can be used to perform these linkages and attributions. Selecting methods that are reliable and produce valid crosswalks are critical to producing results that will be trusted by all relevant stakeholders.

All of the cost metrics and in time many of the quality metrics will be calculated using the QCC claims database. Creating both quality and cost metrics using the QCC claims database presents numerous methodological challenges. We will describe the steps involved with combining multiple years of data and attributing patients to physicians and physicians to primary care groups.

For ambulatory quality of care measurement in 2010, we recommend that the Council license the only publicly-reported measures in the Commonwealth from MHQP. These results are based on the National Committee on Quality Assurance (NCQA) HEDIS measures.

For ambulatory patient experience measure results we recommend that the Council link to the MHQP website. MHQP is the only source of publicly reported statewide clinical quality and patient experience results for Massachusetts physicians. By licensing or linking to existing measures, the Council can focus its limited resources on calculating ambulatory cost measures that cannot be obtained from other sources.

The methodological complexities noted above in calculating ambulatory care quality measures, are also true for ambulatory cost measures. In addition there are issues concerning the appropriate grouping of thousands of cost procedure codes used for billing into understandable episodes of care that can be used for comparisons. One of the most widely used groupers is the Ingenix Episode of Treatment Group (ETG) software. Licensing and implementing this grouper would cost over \$100,000 annually. Given the resources available to the Council, we are

recommending that for 2010 the Council use a custom grouping methodology that is described in detail in the report. In brief, the custom methodology will provide the Council with the average cost for a bundled market basket of recommended services for select conditions. This bundled cost could be compared across physician groups and be displayed on the website along with the average cost for each treatment and procedure included in the bundle. In particular, for 2010, we recommend that the Council begin by using this bundled cost approach for two conditions: diabetes care for the well-controlled diabetic patient, and well baby care for generally healthy infants.

Further we recommend that in future years when resources permit, the Council consider licensing the Ingenix Episode of Treatment Group (ETGs) software to create an expanded assessment of costs.

## **2011 Reporting Plan**

In 2011 we recommend moving beyond hospital and ambulatory care settings to include nursing homes and specialized care centers (dialysis centers, transplant centers and assisted reproductive technologies centers).

We selected these settings since they represent high cost services, and quality metrics are available for all of them. Consumers are involved in making choices among different providers within these settings and have a strong interest in obtaining information about quality and cost to help make these decisions.

Quality metrics for each of these locations are available on public websites. We therefore recommend that the Council download these measures or link to these publicly available websites.

In the case of nursing home measures, we recommend downloading results from the CMS website, Nursing Home Compare and for dialysis measures, from the CMS website Dialysis Facility Compare. For quality information on Massachusetts transplant centers we recommend linking to the USTransplant.org website, and for comparative quality information on Massachusetts-based assisted reproductive technology centers to the website of the Society for Assisted Reproductive Technology.

We also recommend adding hospital and ambulatory care measures for the following conditions in 2011:

- Depression
- Hypertension
- Kidney disease
- Pediatric conditions
- Upper gastro-intestinal disorders
- Urinary tract infections
- Female genital disorders and contraception

Currently there are few measures for most of these conditions. However, numerous measures have been developed by AHRQ and others, and other metrics are in the development stages. These measures are likely to be available for public reporting by the QCC in 2011. During 2010 a list of all relevant measures will be created.

For quality measures for hospital and ambulatory physician group settings we recommend that the Council continue to use the sources recommended for 2010, updating measures and sources as they become available.

For inpatient cost measures in 2011 we recommend that the QCC add professional fees to the facility cost to come up with a combined cost for inpatient procedures and surgeries using a customized Inpatient Episode Grouping. This grouping has the advantage of relying on the currently reported APR-DRG cost and quality categories, but increasing their relevance to the consumers by providing a better estimate of total episode costs.

For ambulatory care we recommend that either additional market basket measures be created to map to the quality metrics, or if feasible, ETGs be licensed and used to create episode-based cost measures.

## **2012 Reporting Plan**

*While we have suggested clinical conditions and settings for years beyond 2011, these suggestions should be viewed as preliminary, meant to provide a direction for focus. Changes in the availability of quality and cost metrics, prevalence and expenditures associated with various conditions and consumer interest all could result in modification of the priority list.*

In 2012 we recommend adding home health care, hospice care and dental care measures to the settings in the reporting plan.

Home health care is a setting where quality metrics are available and consumers are involved in making choices among different providers. Hospice care is a key setting for end-of-life care- a priority area of the Council and generally a preferred alternative to hospitals or nursing homes for end-of-life care. Cost measures can be researched and created for nursing homes and hospice care only if the QCC obtains access to Medicaid and Medicare claims data.

In 2012 we are also recommending quality and cost measures for dental services. For dental performance and costs to be displayed on the website by 2012 several preliminary steps must occur. In 2010, appropriate data elements and formats must be determined and data collection regulations must be written. Collection of claims should begin in 2011. Measuring and reporting on dental care costs and quality present unique challenges. If resources do not permit adequate attention to this area in 2010 and 2011, reporting might need to be put off until 2013 or later.

The following priority areas that span settings and/or conditions, and are critical to improving quality of life and reducing unnecessary cost are also recommended in 2012. These are high priority areas for the Council, but there are very few national endorsed measures available for these areas at this time.

- End-of-Life Care
- Care coordination, continuity and care transition
- Hospital-wide mortality
- Preventable hospital readmissions measures

We have also added conditions for 2012 that relate to some of the newer settings of care and/or are national priority conditions:

- Cancer Treatment
- Cancer Palliative Care
- Skin Disorders
- Glaucoma
- Influenza
- Dental care

### **Future Years (2013 and beyond)**

In future years we recommend adding the following conditions to the measures and conditions we have already recommended:

- Other central nervous system disorders
- Systemic Lupus and other connective tissue disorders
- Other endocrine, nutritional and immune disorders
- Thyroid disease
- Cataract
- Infectious disease (HIV/AIDS)
- Other eye disorders
- Other GI issues
- Headaches

These conditions are the remaining top-ranked priority conditions, as designated by the Institute of Medicine, the National Quality Forum, the National Priority Partnership and the Ambulatory Quality Alliance based on occurrence and expenditures, which have not been included in previous years' reporting plans.

In addition, we recommend that in future years the QCC focus on reporting cost and quality measures that support:

- Continued work on reducing racial, ethnic and language disparities
- Obesity prevention
- Tobacco Cessation
- Patient Self-Management



## Technical Reports

Finally we recommend that several technical reports be created and reported on the Council's administrative website rather than on the consumer site, MyHealthCareOptions.org. These reports would provide either more detailed information for providers, policy makers and other stakeholders, or would begin the process of incorporating analyses of racial, ethnic and language disparities as well as some global quality measures that are not yet precise enough for inclusion on the consumer website.

The QCC should consider posting a technical report, organized by care setting and priority condition and containing measure results by race and ethnicity on the Council's administrative website in 2011. Composite measures reported by The Leapfrog Group for which the component measures can be produced by DHCFP and then re-summarized by race/ethnicity could potentially be added in 2011.

According to the 2008 National Healthcare Disparities Report (NHDR) recently issued by AHRQ, there has been a discouraging lack of progress in reducing the racial and ethnic disparities that had been identified in earlier reports. While addressing disparities in each of the priority areas is important, gaps exist in both the availability of measures and the availability of data needed to identify and address disparities at a local level.

We recommend that the Council begin by reporting on those quality measures where racial/ethnic disparities have been observed at a state or national level in the NHDR and/or in Massachusetts Department of Public Health or Boston Public Health Commission reports and where measure results are currently available or can be created from existing data sources.

In 2012, any measures identified in the 2010 reporting plan for which two years of data must be combined to obtain sufficient sample size for reporting by race and ethnicity could be added to the technical reports on the Council's administrative website as well as data for new measures reported in 2012 that are derived from data sources that include patients' race and ethnicity.

Measures for which data are not currently available to enable stratification of performance by race and ethnicity will require new sources of these data. The most likely candidates for expansion are the National Hospital Quality Measures reported by hospitals to CMS and/or The Joint Commission and the HEDIS measures reported by health plans.

Finally, we anticipate recommendations from the Patient Safety Committee for hospital-wide mortality measures in December of 2009, with likely public reporting of these measures on the Council's administrative site by July of 2010. These measures can be considered for the consumer website in subsequent years.

# 1. INTRODUCTION

This report describes the work completed under the Massachusetts Health Care Quality and Cost Council (the Council, QCC) contract with Massachusetts Health Quality Partners (MHQP) and its partner, Milliman, Inc. The overall purpose of this phase of the project is to create a three-year reporting plan that includes the quality and cost measures to be calculated and displayed on the QCC's consumer website, [www.MyHealthCareOptions.org](http://www.MyHealthCareOptions.org).

In Section 2 details are provided for the 2010 Reporting Plan including settings of care, clinical conditions that should be included, quality and cost measures, reporting frequency, benchmarks for comparisons, and thresholds for inclusion on the website.

For the 2010 Reporting Plan, the contract specifies that measures selected for inclusion on the MyHealthCareOptions website (a) assess performance in ambulatory and hospital care settings, (b) be well-tested and (c) have technical specifications publicly available. The types of measures to be addressed include those that assess quality in terms of condition-based and patient safety-based processes, outcomes and structures, as well as setting-based patients' experience of care. They also include measures that determine utilization volumes and rates, and measures that assess condition- and procedure-specific cost.

To prioritize our work we recommended to the Council that we establish criteria for selecting settings, conditions and measures for each year. The Council approved this focus and we established the following criteria to determine the conditions to include in 2010 and the settings, conditions and measures for future years:

- National consensus on importance
- Conditions where consumers may seek out information
- Conditions with multiple treatment options
- Conditions that are high volume or high cost
- Conditions with quality measures already publicly reported and ideally with National Quality Forum (NQF) endorsement, requiring minimal calculation

To determine if conditions and settings met the criteria above, as well as the principles of the Council, we looked at the priorities agreed on by the NQF, Institute of Medicine (IOM), the National Priorities Partnership and the Ambulatory Care Quality Alliance (AQA). We also used the IOM priority framework and ranked conditions from the Clinical Classification System (CCS) on their impact (level of occurrence and expenditure), inclusiveness (if a high priority for a particular population segment and/or if racial and ethnic disparities were found), and improvability (Massachusetts performance as ranked in the *2008 National Healthcare Quality Report* from the Agency for Healthcare Research and Quality (AHRQ)). For details on the data used for prioritization see Appendix A.

In addition, we met with the QCC Committees on Patient Safety, and End-of-Life Care, as well as workgroups on care transitions and hospital-wide mortality to determine what measures these

groups were aware of or were creating, and when these measures would be available. Our discussions suggested that Serious Reportable Events (SREs) and Hospital-Acquired Infections (HAIs) as reported by the Massachusetts Department of Public Health would be available for the 2010 report, but that others and all care transition, end-of-life and hospital-wide mortality measures would be ready for reporting no sooner than 2011, and in most cases not before 2012 or 2013.

Finally, we looked for nationally-endorsed quality measures in the AHRQ National Quality Measures Clearinghouse (NQMC), and NQF websites and reviewed non-endorsed measures developed by the National Committee for Quality Assurance (NCQA), the Physician Consortium for Performance Improvement (PCPI), the Hospital Quality Alliance (HQA) and The Joint Commission (TJC). We also reviewed the Health and Human Services (HHS) Measures Inventory for other measures used by the Centers for Medicare and Medicaid Services (CMS), the AHRQ, the Centers for Disease Control (CDC) and other federal health agencies, and explored what was available from other Massachusetts state agencies, such as the Department of Public Health (DPH) and MassHealth. We also searched the internet for additional measure information.

In Sections 3 through 5 we present preliminary ideas for specifications of the measures for the 2011, 2012 and future plans. More detail is provided for 2011 than for the later years. Conditions and settings suggested beyond 2011 should be viewed as preliminary, meant to provide direction for focus. Changes in the availability of quality and cost metrics, prevalence and expenditures associated with various conditions and consumer interest all could result in modification of the priority list. In addition we discuss measurement areas that would be more appropriate for display on the administrative website of the Council than on the consumer site.

In Section 6 we will discuss the methodological challenges and the steps involved with combining multiple years of data, attributing patients to physicians and physicians to primary care groups which are necessary to successfully and accurately calculate measures for public reporting.

Finally, in Section 7 we will present information on technical reports that might be created and reported on the Council's administrative website rather than on the consumer site – MyHealthCareOptions.org. These reports would provide either more detailed information for providers, policy makers and other stakeholders, or would begin the process of incorporating analyses of racial, ethnic and language disparities, hospital-wide mortality measures, as well as some global quality measures that are not yet precise enough for inclusion on the consumer website.

## 2. 2010 REPORTING PLAN

### A. Care Settings

**MHQP recommends that quality and cost information be displayed on the QCC MyHealthCareOptions website in 2010 for the following care settings:**

- **Hospitals**
- **Physician offices**

We are limiting our recommendations to these settings in 2010 due to the financial and staffing resources that are required to:

- prepare the QCC claims data set to ensure accurate calculation of cost and quality metrics,
- obtain information from other sources,
- format that information for inclusion on the MyHealthCareOptions website, and
- revise the website to allow for new measures.

### B. Clinical Conditions

**Based on the prioritization criteria agreed upon with the Council, we recommend that measurement and reporting efforts focus on the following high-volume and high-cost conditions in 2010.**

- **Bone and joint conditions: hip and knee replacement and lower back pain**
- **Chronic diseases: diabetes; cardiovascular disease; and respiratory disease**
- **Screening for cancer of the breast, cervix, colon and rectum**
- **Perinatal care services**

### C. Quality Measures

**We recommend that for 2010 only quality measures that are already publicly reported be added to the website.**

Many clinical quality process measures as well as patient experience of care and patient safety measures have been nationally endorsed and are publicly reported. By using these measures, the QCC will be able to focus its resources on creating cost measures which are not calculated by and available from other sources. A list of recommended quality measures can be found in Appendix B.

#### *Calculation Methods*

With all 2010 quality performance information being downloaded from other publicly reported websites, no attribution of patients to physicians or physicians to medical groups, and no

calculation of results are needed. However, examples of patient attribution and HEDIS measure calculations can be found in Appendices C and D, as they will be needed in future years if the Council decides to calculate these measures from its claims database.

#### *Data sources for inpatient clinical quality measures*

The only readily available inpatient clinical quality measures for Massachusetts hospitals are drawn from CMS National Hospital Quality Measures. These measure results can be downloaded directly either from the CMS HospitalCompare website or from The Joint Commission (TJC) QualityCheck website. Data for these measures are supplied by each hospital to a vendor that populates CMS and TJC data fields. Each hospital specifies which measure results should go to CMS and which to TJC. TJC has more measures on its list than CMS. However, since CMS pays incentives to the hospitals for populating certain measures, most if not all hospitals complete those specific measures. TJC requires a certain number of measure sets (each set pertains to a particular condition or type of care) to be reported, but does not specify which ones. As a result, measures for some conditions are not reported robustly by sufficient facilities to publicly report them on the QCC website. For example, the inpatient asthma measures are reported by fewer than 10 Massachusetts hospitals. The QCC currently downloads the more complete CMS results and places them on its website.

Although as noted above, some of the TJC measures are reported by a small number of facilities, the overall infection prevention measure is reported to CMS, and the components are therefore available for reporting on TJC. In the future TJC may face new competition for hospital accreditation, but at this point it is still the dominant accreditation organization in Massachusetts and obtaining the condition-specific SCIP measures will provide consumers who have an interest in a particular type of surgery (e.g. CABG or heart valve surgery), more information on each facility's performance on that specific condition.

**Our recommendation for 2010 is to continue to use the Centers for Medicare and Medicaid Services (CMS) measures and to add procedure specific Surgical Care Improvement Project (SCIP) measures from The Joint Commission.**

#### *Data sources for utilization rates*

Volume indicators, while not measures of quality, in some cases have been shown to affect the outcomes of the care delivered and may be of interest to consumers. In the area of maternity care, where no inpatient quality measures meet the criteria for inclusion, the use of DPH volume and utilization rates will provide consumers with important information and bring a critical health care consumer, mothers, to the website.

**We recommend continuing to report the volume of normal deliveries and Caesarean births at each hospital, adding the volume of vaginal births after a Caesarean (VBAC), and including the utilization rate or percentage of each as reported publicly by the Massachusetts Division of Public Health.**

### *Data sources for inpatient patient safety measures*

There are inconsistencies in reporting and response methods across hospitals in the area of Leapfrog Procedure Volume measures. Therefore, in the long term, we recommend that the QCC replace Leapfrog measures with newer more valid measures as they are developed.

**We recommend that the QCC continue to obtain “Intensivists in ICU”, “Culture of safety: Compliance with NQF’s Safe Practices and HIT measures” from The Leapfrog Group in 2010. We also recommend that for now they continue to use Leapfrog’s Procedure Volume results.**

While any value other than zero indicates a quality problem, the extent of the quality problem may be misperceived if only SRE counts are displayed. Rates could be calculated if the number of applicable discharges for each event could be derived from the Hospital Discharge Data set (HDD).

**We recommend that the QCC place on its consumer website the Serious Reportable Events (SREs) currently reported by DPH as rates by facility, rather than counts.**

**Hospital Acquired Infections (HAIs) will also be available from DPH, and we recommend that the QCC place these on its consumer website.**

Central Line Bloodstream Infection rates should be displayed by facility in the Patient Safety section. These rates will be reported for the ICU only in 2010. Surgical Site Infection (SSI) rates are reported for specific procedures and should be presented along with the SCIP measures for those procedures, where applicable. Hip and Knee replacement SSIs will be reported at a facility level in Oct 2009.

### *Data sources for inpatient patient experience of care quality measures*

Currently the only Massachusetts hospitals patient experience of care information that is publicly reported is provided by CMS and appears on its HospitalCompare website. Since CMS’ methods are nationally endorsed and allow for national comparison as well as within-state comparisons, we recommend that their results continue to be displayed on the consumer website.

**We recommend that the QCC continue to use the Hospital CAHPS survey results in 2010.**

### *Data sources for physician-based ambulatory quality of care measures*

The only source of data for physician-based ambulatory quality measurement in Massachusetts that is publicly reported and uses nationally endorsed measures is the MHQP Quality Insights website, [www.MHQP.org](http://www.MHQP.org). MHQP reports the performance of medical groups across the Commonwealth on National Committee for Quality Assurance (NCQA) HEDIS measures.

The QCC either can link more prominently to the MHQP website on the QCC condition-specific webpage, or license measure results for priority conditions from MHQP and place them directly on the QCC consumer website. The advantages and disadvantages of each option are described below, along with the alternative of having the Operations Vendor, the Division of Health Care Finance and Policy (DHCFP) calculate the ambulatory care quality measures using the QCC database. Despite the decision to use already publicly reported measure results wherever possible in 2010, we did explore having the Council use NCQA HEDIS specifications and calculate ambulatory care measure results using the multi-plan claims database, as this is the major alternative to using MHQP data.

#### Linking to the MHQP website

- The advantage to linking to the website is that it requires minimal resources.
- The disadvantage is that the consumer would go to the MHQP Quality Insights Clinical Quality home page and need to navigate to the condition and providers of interest.

#### Licensing the pertinent MHQP measure results

- The advantage of licensing is that it would allow the consumer to view results on the MyHealthCareOptions website at the same time that they were looking at other condition related results.
- The disadvantage is that it is more require the state to purchase the license for \$5,000 and would also require greater use of internal resources to format the results and prepare the website to display the results.

#### Calculating HEDIS measures from the QCC database

- The advantage of using the QCC data is that it would enable attribution of measures to both PCPs and specialist physicians, whereas the MHQP measures are attributed only to PCPs. This option would also have the advantage of using data from all 11 plans with all fully insured managed care PPO and indemnity members represented. The MHQP data does not have the PPO or indemnity members and only includes the 5 largest plans in the Commonwealth, Blue Cross Blue Shield of Massachusetts, Fallon Community Health Plan, Harvard Pilgrim Health Care, Health New England and Tufts Health Plan. These plans however represent about 90% of the claims currently collected in the QCC database
- The disadvantages of this approach include the following:
  - This would duplicate the reports that MHQP already creates and publicly reports on its website.
  - The QCC database does not have data from self-funded groups that use the plans as Third Party Administrators (TPA), while MHQP measures include these data.
  - The QCC database would not include adjustments to the administrative claims data results which MHQP makes to reflect information received from sample chart reviews.



- Significant state resources would be required to create already available results at the same time that DHCFP is focused on creating cost measure results that cannot be obtained from other websites.

For all of the above reasons we recommend that the QCC license the MHQP data in 2010. As explained above these are the only currently publicly reported ambulatory measures in the Commonwealth and available by license. We further recommend that the QCC move toward using DHCFP in-house calculated measures in future years. Details on the MHQP measurement process can be found in Appendix E.

#### *Data sources for ambulatory care patient safety*

There are few ambulatory care patient safety measures available. One group of measures that can be viewed as patient safety-related is the HEDIS measures that assess if patients are receiving appropriate monitoring of their long term use of selected medications. These medications include angiotensin converting enzyme inhibitors or angiotensin receptor blockers, diuretics, anticonvulsants, and digoxin. These measures can be obtained through the license with or link to MHQP.

**MHQP recommends that the QCC include HEDIS measures that focus on the monitoring of the persistent use of selected medications on its website under the category of patient safety.**

#### *Data sources for ambulatory care patient experience measures*

Currently the only statewide, publicly reported measurement of patient experience in physician offices in Massachusetts is conducted by MHQP. MHQP does not license its Patient Experience Survey (PES) results to others since the comparative analyses required for accurate reporting are quite complex. The downside of linking to the MHQP site for patient experience measure results is that users will need to navigate through a second website to find the information they seek.

The MHQP patient experience results are reported at the practice site level for over 400 practice sites across the Commonwealth. Surveying at the individual physician level would require significantly higher resources. If the Council were interested in reporting patient experience survey results at the individual physician level, the Council could work with MHQP to determine the incremental cost of collecting sufficient data to provide results at this level.

Details on the MHQP's Patient Experience reports can be found in Appendix F.

**We recommend that the Council link to the MHQP website prominently for ambulatory care patient experience performance results.**



### *Frequency of Quality Measure Release*

**We recommend semi-annual refreshes to the QCC website for quality metrics that are published on source websites more than annually, if resources permit. For measures that are updated less frequently we recommend refreshes in the next scheduled reporting cycle following release of these measures.**

### *Quality Benchmarks*

Benchmarks provide a reference to help the consumer assess the quality of a particular provider beyond direct comparisons with other individual providers. We recommend the use of at least two benchmarks for clinical quality and patient experience measures. For a given measure these include:

- **The Massachusetts population-based average**
- **The statewide 85<sup>th</sup> percentile score**
- **The national or New England regional score if available**

We are not recommending benchmarks for the current patient safety measures at this time, as they either are not needed or the data needed to calculate them are not available.

### *Threshold for Reporting Quality*

Using an accepted minimum sample size for reporting results helps to ensure that the results will reliably represent the performance of a provider and distinguish real differences in performances among providers. The ideal minimum reliable sample size can vary based on numerous issues. Our recommendations for thresholds incorporate the QCC's current decisions.

- **A minimum sample size specific to each measure set, using a recognized conventional minimum where one exists**
- **A threshold for hospital inpatient quality of 10 facilities having met the minimum sample size for each measure**
- **For ambulatory care measures, which are new to the QCC site, we recommend a threshold of 50% of eligible medical groups having met the sample size requirement for each measure**

### **D. Cost Measures**

For 2010, given the variety of efforts that the QCC must undertake, we recommend the Council do the following:

- **Continue to calculate inpatient costs using the APR-DRGs for priority conditions and others already on the consumer website.**
- **Use the average cost for a bundled market basket of recommended services for ambulatory care costs, to be displayed along with the average cost for each**

**treatment and procedure included in the bundle, beginning with two high priority conditions: diabetes care and well baby care.**

- **Investigate for possible inclusion on the website in 2011 the incorporation of professional costs for procedural and surgical conditions with facility costs for inpatient care in order to represent the total cost of the hospital stay.**
- **Consider licensing the Ingenix Episode of Treatment Grouper (ETGs) to create an expanded assessment of costs when resources permit.**

A full list of the cost measures for 2010 can be found in Appendix G.

Below we will describe the rationale for these cost recommendations.

### *Options for Display of Professional Service Information*

For billing purposes, professional medical services are classified using approximately 9,000 codes found in the Common Procedural Terminology (CPT) coding rules maintained and licensed by the American Medical Association and another approximately 9,000 Healthcare Common Procedure Coding System (HCPCS) maintained by CMS. Providers can further elaborate on services provided through the use of modifiers to these codes.

Grouping these thousands of procedures into categories has several advantages, including but not limited to:

- Reductions in the number of potential procedures resulting in a set of treatments that are simpler to understand and compare
- Larger cell sizes that result in more reliable measures
- Groupings that can be designed to provide cost indicators that relate to the quality indicators also used on the QCC website
- Ambulatory service groupings that are comparable to current use of APR-DRGs for inpatient care
- Integrated reporting of both professional and facility fees to provide a comprehensive picture of treatment for an identified condition

Milliman compared four grouping methodologies, including two widely recognized third party grouping methodologies, one which may be licensed for a fee and one publicly available; and two customized grouping methodologies. Milliman based the selection of the four grouping methodologies on discussions with QCC members, and experts from MHQP and Milliman. All four grouping methodologies permit the incorporation of both professional and facility fees within a treatment category. The four methods reviewed are as follows:

- Third Party Methodologies
  - Episode of Treatment Group (ETG)
  - Clinical Classification System (CCS)
- Custom Grouping Methodologies

- Inpatient Episode Groupings
- Bundled Care Package Groupings

A review of the features and advantages and disadvantages of each can be found in Appendix H.

Our findings support use of the two customized grouping methodologies as part of the QCC's initial efforts to establish an integrated data warehouse of both facility and professional paid claims from Massachusetts insurers.

Of the models reviewed, CCS would appear to offer the fewest benefits from a consumer perspective, although DHCFP may consider using it as part of its public policy research efforts since there is no licensing fee and it is widely used in epidemiological and public policy research.

ETGs, on the other hand, have the advantage of wide acceptance in the healthcare industry and the inclusion of a wide range of services and costs related to an episode of care. However there is limited ability to customize requests and a significant cost associated with licensing, implementing and maintaining the ETG program.

Even if the QCC eventually licenses and implements ETGs, initial use of the custom groupings would appear to have the following benefits:

- Requires relatively few additional resources to develop, primarily physician input and additional programming time (see sample specifications in the next section)
- Permits QCC to begin meeting its priority to include professional costs on the MyHealthCareOptions website
- Provides an initial step to begin eliciting consumer and physician and other professional provider input on issues with display of ambulatory and professional costs
- Helps test the validity of the database by identifying benchmarks that could be compared across data submissions

The custom Inpatient Episode Grouping also has the advantage of relying on the currently reported APR-DRG cost and quality categories but increasing their relevance to the consumer by providing a better estimate of total episode costs.

The custom Bundled Care Package Grouping supports QCC efforts to provide greater information to consumers on care quality, especially in relation to expected treatment for identified priority needs, such as well baby care and diabetes treatment. These groupings can reflect a recommended course of care so that a consumer may learn about both a preferred treatment for a condition as well as the expected costs for those services. With the creation of costs for the above bundles of diabetes and well baby care services, the QCC will also have the average cost for each service included in the bundle. We recommend that the cost for each individual service is displayed along with the bundle cost so that consumers can gain an understanding of the costs of various components as well as the entire recommended package of services.

Even if the use of ETGs eventually supersedes use of the custom Inpatient Episode Groupings on the website, QCC may wish to continue reporting costs based on the Bundled Care Package Groupings, since it can tailor these groupings to support quality of care initiatives.

### *Calculation Methods - Functional Design Specifications for Bundled Care Package Groupings*

The Bundled Care Package Grouping depicts average costs of identified treatment episodes based on example “packages of care” identified by MHQP’s medical consultant. The consultant considered the services associated with accepted standards for care quality for the identified conditions. Based on discussions with QCC and DHCFP, the preferred unit of attribution for these treatment packages in 2010 appears to be the primary care physician group.

Milliman developed functional design specifications for two care packages for purposes of illustrating the specifications. These care packages are “Diabetic Care” and “Well Baby Care.” DHCFP’s data warehouse manager could use these specifications in developing detailed technical specifications and programs to produce reports based on the custom grouping methodology. Reviewing these specifications also provides a better understanding of the potential for custom groupings. The specifications provided follow a logical progression from explanation of purpose and goals to assumptions and then step-by-step calculations. The listed assumptions are further referenced within each specification description. These assumptions address issues of data quality, attribution, cell size and adjustments for multiple years of data.

The functional specifications for “Diabetic Care” and “Well Baby Care” and the technical specifications that go along with them can be found in Appendices I and J.

QCC and DHCFP have the option of identifying alternative care packages or modifying the composition of the illustrative care packages.

### *Frequency of Quality Measure Release*

**We recommend that the cost measures be calculated annually.**

### *Cost Benchmarks*

**We recommend the QCC continue to use the statewide median provider cost and a within-state regional provider-level median cost for inpatient care, where possible.**

**For ambulatory care service bundles we recommend statewide mean costs since the measure results will be reported as mean costs. Once the QCC moves to ETGs, national benchmarks will be available.**

### *Threshold for Reporting Costs*

Using an accepted minimum sample size for reporting results helps to ensure that the results will reliably represent the performance of a provider and distinguish real differences in performances among providers. The ideal minimum reliable sample size can vary based on numerous issues. Our recommendations for thresholds incorporate the QCC’s current decisions.

- **Hospitals should have at least 30 inpatient discharges or 30 outpatient visits for a given condition so as to ensure statistically valid data samples.**
- **Ambulatory care providers should have at least 30 patients.**
- **There should be a threshold of 10 facilities for hospital inpatient quality.**
- **For ambulatory care measures, which are new to the QCC site, we recommend a threshold of 50% of eligible medical groups.**

#### **E. Analyses Needed in 2010 to Prepare for 2011**

In order to be able to move forward and expand performance results in the settings and conditions that are proposed for 2011, several analyses must be performed and the provision of specific resources must occur in 2010. The following represents the analytic work needed.

- Evaluation of the need for additional regulatory changes to support the reporting plans, such as acquisition of dental claims, acquisition of health plan provider files and reporting of language data by hospitals
- Investigate for possible inclusion on the website in 2011 the incorporation of professional costs for procedural and surgical conditions with facility costs for inpatient care in order to represent total cost of the hospital stay
- Assessment of the feasibility of purchasing a license for the Episode Treatment Groups (ETG) software in order to create quality and cost measure results that are severity adjusted and compatible with third party analytic tools, including benchmarks to national data
- Review of all publicly reported and/or nationally endorsed quality measures to (a) determine new measures that relate to the priority conditions and settings already on the QCC consumer website or planned for 2011 and beyond, and (b) determine which of these measures can be included on the website in 2011 or 2012
- Completion of the upgrades to MyHealthCareOptions website recommended in the MHQP Report on Task 1 and approved by the Council
- Implementation of regulatory changes concerning the collection of dental claims, including determining the elements that should be collected from dental plans and sharing the report formats with plans
- Engagement with data suppliers to increase access to race and ethnicity data needed to stratify measures and address disparities

### 3. 2011 REPORTING PLAN

#### A. Care Settings

**MHQP recommends that quality and cost information be displayed on the QCC MyHealthCareOptions website in 2011 for the following care settings:**

- **Hospitals**
- **Physician Offices**
- **Nursing Homes**
- **Specialized Care Centers: Dialysis Centers, Transplant Centers and Assisted Reproductive Technology Centers**

The addition of nursing homes and specialized care centers meets several of the criteria for inclusion set out in the Introduction (Section 1). In particular, these settings address the concerns for including measures that have achieved a national consensus on importance; represent health issues for which consumers may seek out information and there are a variety of choices; and are high volume or high cost.

Users of more specialized facilities such as nursing homes, tend to research options before committing to a particular location, often because they have one or more serious health conditions and they and/or their families want as much information as possible when making a decision about the care they are about to receive.

These new settings were also added in 2011 because many of the priority conditions that will be added in 2011 will be treated in these new settings. For example, new measures on kidney disease will be added in 2011 and information on care delivered by dialysis centers will be highly relevant.

#### B. New Clinical Conditions for 2011

The conditions that have been identified based on the criteria for prioritization for reporting in 2011 include the following:

- Depression
- Hypertension
- Kidney disease
- Pediatric conditions
- Upper gastro-intestinal disorders
- Urinary tract infections
- Female genital disorders and contraception

### C. Quality Measures

Currently there are few measures in the above categories that are publicly reported beyond HEDIS ambulatory care for children. However, numerous measures have been developed by AHRQ and others, and other metrics are in the development stages now. These measures are likely to be available for public reporting by the QCC in 2011. During 2010 a list of all relevant measures will be created.

#### *Calculation Methods*

If all quality performance measure results added prior to 2011 continue to be downloaded from other publicly reported websites, no attribution of patients to physicians or physicians to medical groups and no calculation of results will be needed.

If the Council decides it has the resources to calculate ambulatory care measures from the QCC database then the following must occur:

1. Obtain, license or purchase the technical specifications for the selected measures from their respective owners and create a program to calculate the measure results for each member who is eligible for each denominator. A sample technical specification can be found in Appendix D.
2. Using a cleaned data set, perform the above calculation.
3. Match physicians across the 11 plans and create a unique ID for each, using either an in-house matching methodology or purchasing an existing methodology.
4. Determine the algorithm that will be used to attribute members to physicians and perform that attribution. A sample algorithm can be found in Appendix C.
5. Determine a method to attribute physicians to medical groups or purchase an existing methodology and combine the results for each measure for all physicians attributed to a given group and calculate the group's score for each measure.

Note that the steps 3 through 5 are the same steps that will need to occur for ambulatory care cost measure calculation as well as for ambulatory care quality measure calculation.

#### *Data sources for nursing home care*

**We recommend that the QCC download nursing home measure results at no cost from the CMS website, Nursing Home Compare.**

#### *Data sources for dialysis centers*

**We recommend that the QCC download Dialysis measure results at no cost from the CMS website, Dialysis Facility Compare.**



### *Data sources for transplant centers*

The Scientific Registry of Transplant Recipients supports the ongoing evaluation of the scientific and clinical status of solid organ transplantation in the United States. It is administered by the Arbor Research Collaborative for Health with the University of Michigan. Its responsibilities include designing and carrying out rigorous scientific analyses of data and disseminating information to the transplant community. Much of this work is a result of investigative efforts by SRTR researchers and scientific collaborators. Its measures are reported on the [UTransplant.org](http://UTransplant.org) website and are in a PDF format.

Were the QCC to purchase Monarch, a relatively inexpensive software tool, that creates a database (e.g. an excel file) from a pdf or scanned hardcopy report, DHCFP could use Monarch to pull the numbers from the transplant center reports and put them into a spreadsheet that could be loaded into the QCC reporting tool. If the report formats stay the same, Monarch could be set up once to extract the desired data from the transplant center reports and re-used to update the data when new reports are published.

**We recommend that the QCC link to the [UTransplant.org](http://UTransplant.org) website which was developed by the Scientific Registry of Transplant Recipients (SRTR) or copy the data on the website and display the results on the MyHealthCareOptions website.**

### *Data sources for Assisted Reproductive Technology Centers*

The Society for Assisted Reproductive Technology is a professional society for centers that practice assisted reproductive technologies in the United States. It represents over 85% of such clinics in the US. Since 1985, SART has been involved in the collection of data outcomes from its member programs. They report the same measures as the CDC but in a more timely fashion. The report format was developed with input from both SART professional members and patient support organizations to maximize the efficiency and meaning of the results reported. Eight Massachusetts centers are included on the SART website.

**MHQP recommends that the QCC investigate whether the Society for Assisted Reproductive Technology (SART) would be willing to provide the QCC with a downloadable file of results which the QCC could then display on its website. If this were not possible then the QCC should link to the SART website.**

### *Data sources for inpatient hospital, ambulatory care, patient experience and patient safety quality measures*

If new measures pertinent to priority conditions become available from these sources and meet the general QCC criteria they should be added as well. If new sources of measures become available they will be reviewed and if appropriate added to the list of recommended data sources.



**At this time we recommend that the QCC continue to use the same data sources as described above in the 2010 Reporting Plan, including CMS, TJC, DPH, Leapfrog, and MHQP.**

### *Frequency of Measure Release*

**We recommend semi-annual refreshes to the QCC website for quality metrics that are published on source websites more than annually, if resources permit. For measures that are updated less frequently, we recommend refreshes in the next scheduled reporting cycle following release of these measures**

### *Quality Benchmarks and Thresholds*

As new research is continually being conducted in the area of quality of care measurement, these recommendations will be revised if new, better concepts of effective benchmarks and thresholds are developed.

**At this time we recommend that the QCC continue to use the same benchmarks and thresholds recommended above in the 2010 Reporting Plan.**

## **D. Cost Measures**

Grouping the facility cost with professional fees for inpatient procedures and surgeries has the advantage of relying on the currently reported APR-DRG cost and quality categories but increasing their relevance to the consumer by providing a better estimate of total episode costs.

**In 2011 we recommend that the QCC combine the facility cost with professional fees for inpatient procedures and surgeries using the custom Inpatient Episode Grouping.**

**We also recommend that either additional market basket ambulatory care measures should be created to map to quality metrics, or if feasible, ETGs should be licensed and used to create episode-based cost measures.**

### *Calculation Methods - Functional Design Specifications for Episode Grouping*

These groupings combine facility fees and professional fees to estimate total average costs of care for an inpatient stay. The results are organized by APR-DRG and the unit of attribution is the facility. Therefore, these groupings represent an expansion of the current MyHealthCareOptions website reporting of facility fees alone that have been grouped by APR-DRG.

To achieve a grouping of facility and appropriately matching professional fees without using the detailed algorithms available through ETGs, the methodology relies on simple matching between the days of the inpatient stay and the professional services provided during that stay. DHCFP

may consider increasing the dates of the inpatient stay to account for professional services that were likely related to the stay but provided before and after the stay itself.

Even with adjustments to the dates of the inpatient stay, the estimates may be subject to some variation as a result of capturing unrelated professional costs or not capturing all professional costs related to the stay. It is possible that a patient may receive some professional services related to the inpatient stay outside of the estimated timeframes, or that the patient may receive professional services not related to the stay within the timeframe. In some cases, professional services billed for a hospitalization but delivered outside the admission to discharge time window are captured based on global CPT billing codes such as those that may encompass pre-op and post-op care for surgical patients or prenatal and postpartum care for obstetrical patients. Encompassing this care could actually facilitate a more accurate accounting of services and costs related to those care events. DHCFP will need to closely examine its data and obtain input from medical professionals in determining whether the impact of these variations is significant for calculating the average costs by facility.

Milliman has prepared functional design specifications that DHCFP's data warehouse manager could use in developing detailed technical specifications and programs to produce reports based on the custom grouping methodology. As noted in the 2010 Reporting Plan, the specification provided follows a logical progression from explanation of purpose and goals to assumptions and then step-by-step calculations. The listed assumptions are further referenced within the specification description. These assumptions address issues of data quality, attribution, cell size and adjustments for multiple years of data. The function and the technical specification documents for inpatient costs based on the following functional specification can be found in Appendix K.

#### *Frequency of Measure Release*

**We recommend semi-annual refreshes to the QCC website for metrics that are published on source websites more than annually, if resources permit. For measures that are updated less frequently, we recommend refreshes in the next scheduled reporting cycle following release of these measures.**

#### *Quality Benchmarks and Thresholds*

**At this time we recommend that the QCC continue to use the same benchmarks and thresholds recommended above in the 2010 Reporting Plan.**

These recommendations will be revised if new, better concepts of effective benchmarks and thresholds are developed.

### **E. Analyses Needed in 2011 to Prepare for 2012 and Beyond**

In addition to continuing the work suggested for 2010 (e.g., updating the data in the warehouse, researching new measures for the conditions that are on the website), in 2011 the QCC should begin to receive and clean dental claims.

## 4. 2012 REPORTING PLAN

### A. Care Settings

Home health measures are downloadable at no cost from the CMS website, [Home Health Compare](#). Home health care is a vital service to the aging population and is an important area of information for consumers. While 2.2 % of the non-institutionalized U.S. population has home health care expenses, the median expenditure for home health services is second only to Inpatient Hospital costs for this population (Source: Center for Financing, Access, and Cost Trends, AHRQ: Medical Expenditure Panel Survey Household Component, 2006).

Hospice Care is a critical aspect of End-of-Life care. The entire area of End-of-Life care is being investigated by QCC committees, and measures are expected to be created and publicly reported over time. Nationally endorsed measures of care delivered by hospice providers currently exist but are based on survey data that are not publicly available at this time. Other nationally-endorsed measures focus primarily on use of hospice as a less costly and generally preferred alternative care setting and are attributed to facilities in other settings. For example, a measure of the percent of patients with lung cancer who died in a given hospital might be compared across hospitals to determine which hospitals may be less likely to promote hospice care with their patients. CMS has been collecting data for several years and has recently expanded the information that must be on claims from hospice centers. It is thought that CMS will be making data similar to Hospital and Home Health Compare available in the future.

Dental care is an area where there has been little quality and cost information provided to the public and yet it is a service which many individuals pay for either fully or partially out of pocket. While there will be challenges associated with creating cost and quality measures in dentistry because it has not been done before in Massachusetts, we recommend setting 2012 as the target date for inclusion of these services, pending available resources on the part of the QCC and DHCFP. Dental claims would need to flow to the Council's data warehouse beginning in 2011, as 12-18 months are needed before measures could be reported publicly, and requests for data would need to be sent to the dental plans about 6-12 months prior to the submission date in order for them to prepare for the data submission process. Since this requires regulatory action, it was recommended that analysis, formulation and implementation of regulatory requirements for submission of dental claims begin in 2010. For dental performance and costs to be displayed on the website by 2012 several preliminary steps must occur. In 2010, the QCC should determine appropriate data elements and formats and data collection regulations must be written. Collection of claims should begin in 2011. If resources do not permit adequate attention to this area in 2010 and 2011, reporting might need to be put off until 2013 or later.

**In 2012 MHQP recommends maintaining the care settings in place in 2011 and adding Home Health Care, Hospice Care, and Dental Care.**

## **B. New Clinical Conditions for 2012**

**MHQP proposes continuing with all previous measures (unless they are retired or discontinued) and conditions and adding to the measures reported in 2012, the following:**

- **Cancer Treatment**
- **Cancer Palliative Care**
- **Skin Disorders**
- **Glaucoma**
- **Influenza**
- **Dental conditions**

**In addition, we recommend adding the following priority areas that span settings and/or conditions:**

- **End-of-Life Care**
- **Care coordination, continuity and care transition**
- **Hospital-wide mortality**
- **Preventable hospital readmissions measures**

There is work in process on all of these areas by committees and workgroups under the QCC, and it is anticipated that measures and recommendations will be available to the public by 2012.

## 5. REPORTING PLAN FOR 2013 AND FUTURE YEARS

Again we recommend maintaining previously reported measures that are still endorsed nationally. To these we would add measures related to the following conditions:

- **Other central nervous system disorders**
- **Systemic Lupus and other connective tissue disorders**
- **Other endocrine, nutritional and immune disorders**
- **Thyroid disease**
- **Cataract**
- **Infectious disease (HIV/AIDS)**
- **Other eye disorders**
- **Other GI issues**
- **Headaches**

These conditions are the remaining top-ranked priority conditions, as designated by the Institute of Medicine, the National Quality Forum, the National Priority Partnership and the Ambulatory Quality Alliance based on occurrence and expenditures, which have not been included in previous years' reporting plans.

In addition, we recommend that in future years the QCC focus on reporting cost and quality measures that support:

- **Continued work on reducing racial, ethnic and language disparities**
- **Obesity prevention**
- **Tobacco Cessation**
- **Patient Self-Management**

## 6. METHODOLOGICAL ISSUES FOR CREATING MEASURES

All of the cost metrics and in time many of the quality metrics will be calculated using the QCC claims database. Creating both quality and cost metrics using the QCC claims database presents numerous methodological challenges. In this section of the report we will describe the steps involved with combining multiple years of data, and attributing patients to physicians and physicians to primary care groups.

### *Cell (Sample) Size*

Setting cell sizes that produce reliable results is an essential step in developing reports. This issue was discussed in detail in the Task 1 report. In sum, we have recommended that the QCC maintain the cell sizes that have been established by the source of the measurement results, or for measures calculated by the QCC from its claims database, nationally accepted cell sizes.

### *Combining Multiple Years of Data*

At times there are insufficient data points in one year for calculating cost measures. In these cases it often makes sense to combine multiple years of data. However one cannot simply add the years together but must often adjust prior year costs so that they are equivalent to the current year.

Healthcare costs in the U.S. have grown rapidly for many years, significantly exceeding inflation trends for other goods and services. As a result, to accurately estimate the current cost of healthcare services using data from previous years, it is useful to account for estimated increases in the prices of health care services over the period of time that the data represent. Actuarial and economic analyses can allow for historical trends by multiplying paid claim amounts by a factor that would help adjust for likely price changes. For example, last year's prices for a surgical procedure might be multiplied by a factor of 1.08 to represent an eight percent increase in prices for the same procedure in the current year.

Many factors, however, can influence trend. For example, those paying for services may not agree to increase their payments or a procedure may cost less to provide over time because of improved technology. In other cases, increased demand for certain types of care can make prices increase more rapidly.

To best estimate an appropriate service price adjustment factor for a specific situation, such as the consumer price information displayed on the QCC website by facility or provider group, analysts may integrate information sources such as:

- Published indices describing historical and projected health care cost trends
- Knowledge gained from other studies addressing health care costs

- Reports from healthcare payers and providers on their own experience with service price changes
- An assessment of trends based on actual multi-year data such as that maintained by the Department on behalf of QCC

While improvements in quality can occur from one year to the next, they often take two years to appear in annual quality performance measures due to lags in measurement and the time needed to implement a quality improvement strategy and yield results. In some cases, where sample sizes are too small to report at a provider level based on one year of data, pooling data for two years may be reasonable.

### *Patient Attribution to Primary Care Providers*

The MyHealthCareOptions website currently attributes inpatient claims payments to facilities, not to the patient's primary care physician (PCP). Algorithms described in other sections of this report require attributing patient care to a PCP or to a specialist physician as a step in the calculations.

Use of patient-to-physician attribution is a relatively common practice in healthcare management reporting, and supports coordination of care and the view of patient treatment as a whole rather than a collection of individual conditions. In some instances, PCPs may object to the implication of control over specialist interventions, and some individuals with complex conditions may be excluded because of limited contact with PCPs. In these later cases, the specialists with the most visits for a given condition can be substituted for a primary care physician, as he or she may be seen as the primary provider responsible for the care the patient receives for that condition.

DHCFP has options in developing methods for attributing patients to PCPs and may also decide to use a recognized third party algorithm. Table 1 compares several viable options, which may be used in combination.

**Table 1: Options for Patient Attribution to PCPs**

Benchmark Options for Quality Measures			
Method	Summary	Advantages	Disadvantages
Most Visits or Most Relative Value Units (RVUs)	Attributes the patient to the PCP who had the most visits or RVUs with the patient. A variant of this method is to require a minimum threshold of visits for attribution.	<ul style="list-style-type: none"> <li>▪ Assigns to the most frequently seen physician, who could be more likely to have long-term relationship with patient</li> <li>▪ More likely ensures that a patient truly has a relationship with the physician</li> <li>▪ Reduces the impact of data quality errors</li> </ul>	<ul style="list-style-type: none"> <li>▪ May not be the PCP the patient is currently seeing</li> <li>▪ Complex to implement</li> <li>▪ Could reduce the number of patients attributed</li> </ul>
Existing PCP Identification	Attributes the patient to the PCP that is identified by data source	<ul style="list-style-type: none"> <li>▪ Widely recognized and accepted method</li> <li>▪ Payers often have rigorous PCP paneling methods as</li> </ul>	<ul style="list-style-type: none"> <li>▪ Does not exist for many payers</li> <li>▪ May not reflect the PCP who the</li> </ul>

Benchmark Options for Quality Measures			
Method	Summary	Advantages	Disadvantages
		part of their care and cost management programs <ul style="list-style-type: none"> <li>Can have been previously agreed to by patients and physicians</li> <li>Can tie in to existing accountability systems</li> </ul>	patient is actually seeing
Last (or First) Visit	Attributes the patient to the PCP who they last saw during the reporting period. A variant on this is to attribute based on the first visit.	<ul style="list-style-type: none"> <li>This physician is more likely to see patient on the next visit</li> <li>Simple rule to implement</li> <li>Other consumer websites use this approach (most notably the state of Washington)</li> </ul>	Patient could have seen another PCP many more times

Given these options, one reasonable approach for DHCFP is a tiered assignment process that, for example, first considers the primary care provider with the greatest number of visits, then, if this is insufficient, looks to existing PCP identification, and if this identification is missing or still insufficient, looks at the last primary care provider visited. An example of a technical specification for attributing patients to physicians can be found in Appendix C.

#### *Attribution of Primary Care Providers to Primary Care Groups*

Both the ambulatory care quality and cost measures in the reporting plans use primary care physicians in medical groups, rather than primary care physicians individually as units for analysis. The advantages of this approach are increased cell sizes for analysis and simplified reporting since there are fewer primary care provider groups than providers. In addition, research conducted by MHQP suggests that while attribution of patients to individual physicians using a conservative algorithm can correctly identify the PCP 90% of the time, for the majority of the other cases, when the PCP attribution is not correct, the medical group attribution is correct.

For this approach, DHCFP will need a method for mapping primary care physicians to a medical group. In many cases, this information may be found on the claim itself, either specifically identified or inferred through address data elements. However, research done by CMS as part of its Better Quality Information for Medicare Beneficiaries project suggests that the grouping data on claims, (generally the Tax Identification Number (TIN)), often refers to a billing organization rather than a care delivery organization that consumers understand. A second approach would be to take advantage of physician directories maintained by the health plans. However, MHQP has observed that groupings vary significantly among plans and relate more to contracting relationships than to care delivery settings. MHQP has assembled a provider database that links physicians to practice sites and medical groups, and this database, which begins with health plan data but is validated with medical groups, includes most primary care providers in Massachusetts.



## 7. TECHNICAL REPORTS

The Council has recognized that both the level of detail and presentation format for quality and cost information should reflect both the needs of different users and the limitations of the data. In response, MHQP is providing background information and recommendations for sharing additional information with providers and other stakeholders on its administrative website, rather than on its consumer website, [MyHealthCareOptions](#).

### A. Reports for Providers

Historically, the Council has shared information on provider performance that will be posted on its consumer website with providers in advance of posting that information. The level of detail needed in these reports to enable a review of the completeness and accuracy of performance results by providers is greater than that presented to consumers on MyHealthCareOptions. Also, the format of this information needs to support analysis by providers. Dissemination of provider reports in advance of posting should be continued, using the most cost-effective dissemination mechanism(s) available to the Council.

Many of the measures reported on the Council's consumer website are collected and reported publicly by other entities (e.g. CMS, The Joint Commission, The Leapfrog Group, MHQP, etc.) and the Council is relying on the data collection protocols and audit procedures of those organizations for assuring the completeness and accuracy of such measures. In these cases, technical validation reports for providers need only include sufficient information to assure consistency with the measure results reported by these other entities. Any differences from those entities in reported performance levels should be clearly explained in a technical appendix. Such differences may include the development and use of composite measures based on individual measure results acquired from these other entities, differences in the timeframes on which reported performance is based and/or the application of different rating methodologies to the measure results acquired from these entities. Measures produced by DHCFP, the Council's Operations Vendor, may require additional detail on their calculation methodology as may those produced by the Massachusetts Department of Public Health.

**It is recommended that reports to providers include the following information:**

- The organization whose performance is reflected in the results (i.e., if performance results for multiple facilities were reported as a single provider entity, all facilities included in the results for that entity should be identified).
- The time period reflected in the performance measures to be displayed on the Council's consumer website. If different time periods pertain to different measures, this should be noted.
- Measure-specific information, including:
  - The measure name used on the Council's consumer website

- The measure owner (e.g. AHRQ, CMS, The Joint Commission, NCQA, etc.)
  - The measure's National Quality Forum endorsement status
  - The data source used for each measure result
  - The measure name (and measure identifier, if available) used by the data source
  - A high level description of the denominator population
  - A high level description of the numerator event(s)
  - The measured performance rate and, if available, the numerator and denominator used to calculate that rate
  - The benchmark rate used for the measure, if applicable
  - The performance rating given to the provider's measure result, if applicable
- For any composite measure created by the Council, based on individual measure results acquired from the data source, the following additional information should also be provided:
  - The measure names (and/or measure identifiers, if available) used by the data source for all measures that were combined to create the composite measure
  - A high level description of the composite measure denominator
  - A high level description of the composite measure numerator
  - The actual measured performance rate and the numerator and denominator used to calculate that rate
  - The adjusted performance rate, if applicable
  - The performance rating given to the composite measure result, if applicable
- A detailed technical appendix containing the following:
  - The measure name used on the Council's consumer website
  - The measure owner (e.g. AHRQ, CMS, The Joint Commission, Leapfrog, NCQA, etc.)
  - The measure's National Quality Forum endorsement status
  - The data source used for each measure result
  - The measure name (and measure identifier, if available) used by the data source
  - A detailed description of the method used to calculate the measure numerator and denominator or a reference and, if available, a hyperlink, to such technical information as provided by the measure owner
  - A detailed description of the method used to calculate the performance rate, including any risk-adjustments made by the Council's vendor to the individual measure results
  - A detailed description of the method used to calculate any composite measure from the individual component measures reported by the data source, including any case mix or risk adjustment method
  - A detailed description of the methodology used to rate performance on each measure

It is recommended that all information other than that included in the technical appendix, be provided in spreadsheet format, so that it can be manipulated by providers to facilitate validation and internal reporting.

## **B. Reports for All Stakeholders**

It is likely that multiple stakeholders will need to be engaged in improving performance on the quality and cost measures reported to Massachusetts consumers. In addition to reports on quality and cost performance by provider, these stakeholders may want to see performance results aggregated somewhat differently to support their respective roles and objectives. To the extent that the level of granularity at which the performance data were obtained permits alternative aggregations and the QCC has the resources available to create such reports, they could be made available to these stakeholders on the Council's administrative website. Examples of alternative aggregations include:

- Statewide performance results for all measures
- Performance results by provider in an integrated format
- Performance results by geographic region or health service area
- Performance results by race and ethnicity (and language, when available)

*Statewide performance results* will be used as the benchmark for rating provider-level performance and will be available for each measure on the consumer website. For most quality measures, the benchmark is a statewide population average; however, for those measures where only rates are available from entities that publicly report the measures, the benchmark is a provider average (e.g. HCAHPS measures). Benchmarks for quality and cost measures will sometimes be a statewide population average, a provider average or a statewide population or provider median. The choice of a benchmark will depend on the available data, the sample sizes and the distribution of performance. An integrated report showing the statewide benchmarks for all reported measures could be provided to all stakeholders.

All stakeholders could also benefit from having access to an *integrated version of the provider reports* that includes all similar providers in one spreadsheet were there sufficient resources to create it. Separate spreadsheets containing all of the data elements included in above-described provider reports, *as corrected by providers*, could be available for each provider type based on the setting in which care was measured (e.g., hospital inpatient, hospital outpatient, physician inpatient, physician office, nursing home, etc.). All stakeholders might also have access to the technical appendix to the provider reports as described above.

*Regional performance results* may be useful to state policy-makers, employers or business groups, and health plans with limited or concentrated geographical service areas, as well as providers that operate in specific geographic regions. The six Executive Office of Human Service health care regions and the five metropolitan regions used by the Department of Public Health are useful geographic groupings for these stakeholders.

Aggregation of performance results by race, ethnicity and language poses some additional challenges. These challenges will be described further in the next section, along with recommendations for addressing them in the 2010 and future reporting plans.

### **C. Quality and Cost Performance by Race, Ethnicity and Language**

While numerous disparities in quality of care have been attributed to language communication problems between providers and patients, none of the underlying data sets that are used to report currently published quality measures contain a data element for the patient/member's preferred or primary language. The data sets used to report the CMS/TJC National Hospital Quality Measures do not include the patient's language and, given that these data sets are nationally defined; requiring hospitals to add a data element for language in the data they submit to vendors may necessitate the development of a separate data submission file, posing an undue burden on hospitals. However, several hospital performance measures reported on the QCC consumer website are calculated using the DHCFP hospital discharge data set (i.e., casemix and charge data). While the Boston Public Health Commission currently requires Boston hospitals to include patient's spoken and written language on the data files they receive, the Division does not include language fields in the casemix and charge data files they receive from hospitals. If the DHCFP were to modify their regulation to require hospitals to submit language data, all quality and cost measures calculated using this data set could be stratified by language.

One option for producing ambulatory quality measures is for the DHCFP to calculate the measures using the QCC member eligibility and claims data sets. If DHCFP were to do so, an opportunity to stratify those measures by a member's primary language should exist in the near future. A recent regulatory change will require health plans to begin reporting a member's primary language in July 2010. However, many health plans have only begun to collect language data across their membership and reporting levels will probably not support stratification of measures produced from these data before 2012, and possibly later.

The 2008 National Healthcare Disparities Report (NHDR) recently issued by the Agency for Healthcare Research and Quality does not address disparities associated with language barriers, but presents a fairly comprehensive tracking of racial and ethnic disparities. A limitation of the NHDR is the time lag between the performance period being measured and the availability of performance results in the NHDR. It is possible that disparities observed for some of the reported measures may have decreased since last measured. However, as in previous NHDRs, most measures showed a discouraging lack of progress in reducing the disparities that had been identified in earlier reports. While state-specific data on disparities have not been issued, a 2007 report by the Massachusetts Department of Public Health confirmed many of the national findings and the lack of significant progress at a national level suggests that state-specific disparities identified in the 2007 reports are still reasonable priority areas for which to target reductions.

Overlap and gaps between the priority areas identified for the 2010 and future reporting plans and those in which disparities have been reported at a national and/or state level are identified in Table 4.

**Table 4: Priority Conditions with Known Disparities in Care by Reporting Year**

Racial/Ethnic or Language Disparity			
	None/Small	Moderate	Large
<b>2010 Priority Conditions</b>	<ul style="list-style-type: none"> <li>▪ Bone and Joint Care</li> <li>▪ Cervical Cancer Screening</li> <li>▪ AMI Process of Care</li> <li>▪ CHF Process of Care</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adult Asthma and COPD</li> <li>▪ Adult Vaccinations (Flu, Pneumovax)</li> <li>▪ Breast Cancer Screening</li> <li>▪ Smoking Cessation Counseling</li> <li>▪ AMI Mortality</li> <li>▪ CABG/PCI Mortality</li> <li>▪ CHF Outcomes</li> <li>▪ Surgical Infection Prevention</li> </ul>	<ul style="list-style-type: none"> <li>▪ Childhood Asthma</li> <li>▪ Pneumonia Admission Rate and Process of Care</li> <li>▪ Colorectal Cancer Screening</li> <li>▪ Stroke Mortality</li> <li>▪ Surgical Site Infections</li> <li>▪ Diabetes Outcomes</li> <li>▪ Prenatal Care</li> <li>▪ Normal Newborn</li> </ul>
<b>2011 Priority Conditions</b>		<ul style="list-style-type: none"> <li>▪ Communication with MDs</li> <li>▪ Timely Access to Care</li> <li>▪ Patient Centeredness of Care</li> <li>▪ Treatment of Depression</li> <li>▪ Infertility Treatment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Preventive Care Advice</li> <li>▪ Kidney Disease and Dialysis Care</li> <li>▪ Kidney Transplants</li> <li>▪ Liver Transplants</li> <li>▪ Nursing Home Care</li> </ul>
<b>2012 Priority Conditions</b>	Inappropriate Medications	<ul style="list-style-type: none"> <li>▪ Home Health Care</li> <li>▪ Pain Management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hospice Use</li> <li>▪ Cancer Care</li> <li>▪ End of Life Treatments</li> <li>▪ Dental Care</li> </ul>

While addressing disparities in each of these priority areas is important, gaps exist in both the availability of measures and the availability of data needed to identify and address disparities at a local level. Since little is known about how available cost measures may vary by race or ethnicity and since such measures are confounded by socio-economic status, health insurance status, health benefit coverage and where people obtain their care, it is recommended that the Council focus on disparities in quality measures.

**We recommend that the Council begin by reporting on those quality measures where racial/ethnic disparities have been observed at a state or national level in the NHDR and/or in Massachusetts Department of Public Health or Boston Public Health Commission reports and where measure results are currently available or can be created from existing data sources. Further, we recommend that the Council and its Analytic Consultant and Operations Vendor explore approaches to expand the measurement and reporting of quality performance for the priority conditions and care settings identified in each year's reporting plan.**

**We recommend that the Council proceed on two fronts in its 2010 reporting plan:**

- For quality measures in the 2010 reporting plan where person-level results are created by the state, and for which the person's self-reported or indirectly attributed race and/or ethnicity are also available, **we recommend that DHCFP stratify the measure results by race and ethnicity and evaluate the potential to publicly report stratified measures in 2011. The following stratifications are suggested:**
  - *Provider-level* quality and cost measures produced by DHCFP from the MA Hospital Discharge Data set by race and ethnicity.
  - *Provider-level* quality measures produced by MA DPH by race and ethnicity.
  - *Statewide and regional/metro level* quality and cost measures produced by DHCFP from the MA Hospital Discharge Data set by race and ethnicity.
  - *Statewide and regional/metro level* quality measures produced by MA DPH by race and ethnicity.
- **For all other QCC-reported measures and other measures where statewide disparities have been identified in the NHDR by race and ethnicity, we recommend the following:**
  - Explore with CMS, the Massachusetts Hospital Association, individual hospitals and/or hospital data vendors how DHCFP might be able to acquire other publicly reported quality measure results by race and ethnicity.
  - Explore how the DHCFP or other state agencies might be able to replicate other quality measures in the NHDR where state-level disparities were observed for reporting at the regional, metro and/or provider level.
  - Explore how other data sources available to DHCFP could be used to identify patterns of health care use by different racial/ethnic groups that may suggest disparities where they may not be directly measurable.

At a minimum, measures should be stratified for each race and for Hispanic ethnicity, providing that a minimum of 30 observations are available for each racial/ethnic group. Where fewer than 30 observations are available for a given racial/ethnic group, evaluate whether combining data from the two most recent reporting years would result in sufficient sample size to report data for that group. To the extent that sample sizes for other ethnic groups are adequate, quality performance for those groups should also be reported.

#### **D. Quality Measures for Reporting Performance by Race and Ethnicity**

A list of the quality measures in the 2010 reporting plan that can potentially be reported by race and ethnicity in 2011, given the above recommendations and pending adequate sample size can be found in Appendix L.

The QCC should consider posting a technical report, organized by care setting and priority condition and containing measure results by race and ethnicity on the Council's administrative website in 2011. Also, composite measures reported by The Leapfrog Group for which the component measures can be produced by DHCFP and then re-summarized by race/ethnicity could potentially be added in 2011. This report could be provided in spreadsheet format as well as in HTML format. A technical appendix describing the completeness of self-reported race and



ethnicity information in the data sources used to create the reported quality measures should also be provided.

In 2012, any measures identified in the 2010 reporting plan for which two years of data must be combined to obtain sufficient sample size for reporting by race and ethnicity could be added to the technical reports on the Council's administrative website as well as data for new measures reported in 2012 that are derived from data sources that include patients' race and ethnicity.

### **E. Exploring the Potential to Report Additional Quality Measures by Race and Ethnicity**

Measures for which data are not currently available to enable stratification of performance by race and ethnicity will require new sources of these data. The most likely candidates for expansion are the National Hospital Quality Measures reported by hospitals to CMS and/or The Joint Commission and the HEDIS measures reported by health plans.

#### *Hospital Quality Measures*

Potential sources for hospital quality measures in the National Hospital Quality measurement set include CMS, hospital data vendors and individual hospitals. The most cost-effective source would be CMS or its data vendor, since they have data for the largest number of providers. However, CMS does not currently report publicly on some of the procedure-specific measures listed above and their availability from CMS would need to be determined. In addition, applicable federal data release policies and procedures may be restrictive and/or lengthy and it is unknown whether CMS would require the Council to pay for these data. Since hospitals already report individual patient level data to their respective data vendors, these vendors would represent an alternative source and one that would be preferable to requiring individual hospitals to supply additional data to DHCFP.

The feasibility and cost of obtaining provider-level quality results for the hospital quality measures recommended in the 2010 and future reporting plans by patient race/ethnicity should be assessed in 2010. If provider-level data can be obtained from CMS or its vendor, reporting of the hospital measures might ideally commence in 2011. The same may be true if hospital data vendors can supply provider level results by patient race/ethnicity. However, if CMS or hospital data vendors can only supply person-level data, including race and ethnicity, and provider-level measure results must be calculated by DHCFP, the programming of measures could not commence until 2012, given available resources and reporting may not be feasible until 2013.

#### *Ambulatory Quality Measures*

It is unlikely that the QCC member eligibility files will represent a feasible and useful source of office-based physician group or practice-level quality performance data by race and ethnicity before 2015. To report using this data source, not only would the DHCFP need to complete the programming of the physician office-based quality measures from the QCC claims and eligibility data, but the race and ethnicity fields on the eligibility files would need to contain values other than "unknown" for a sufficient percentage of health plan members to support stratification of

performance by self-reported race and ethnicity. If the DHCFP were able to program these measures in 2011 for reporting in 2012 and the Council were able to implement the Expert Panel recommendation to adopt indirect methods of reporting by race and ethnicity, stratification of physician-office-based quality measures could possibly commence as soon as 2012. However, reporting of these measures at the physician group level will be limited due to sample size. Measures of preventive care may be reportable at the group or practice level, but most measures will likely have to be aggregated to the regional or metro level to achieve sufficient sample sizes for reporting.

A potential alternative source for such data is MHQP. MHQP currently receives HEDIS measure results at a provider level from its member health plans. Those data are not stratified by race and ethnicity, nor do most plans currently have the capability to do so. It may be feasible for MHQP's member health plans to supply de-identified person-level measure results, including any available race/ethnicity data for each member to MHQP in the future. MHQP could then aggregate the member-level data by physician and by physician and race/ethnicity. The completeness of the health plan race/ethnicity data will depend on both the extent to which health plans have collected self-reported member race and ethnicity (also a limitation in the QCC data) and the extent to which they have implemented indirect methods for reporting by race and ethnicity. The same limitations regarding which measures would have a sufficient sample size using the QCC data would pertain to any data supplied by MHQP. The feasibility of this change in MHQP's current reporting requirements for member plans could be explored in 2010, providing it is in scope for a 2010 consulting contract with the Council.

### *Quality Measures for Other Care Settings*

The recommended 2011 reporting plan calls for the addition of quality measures for nursing homes and specialty providers. As currently recommended, the latter include dialysis centers, assisted reproductive therapy (e.g. infertility treatment) centers and organ transplant centers.

The recommended 2012 reporting plan calls for the addition of quality measures for home health agencies, hospice providers, and dental care.

Quality performance measures for nursing homes, home health agencies and dialysis centers are all currently reported by CMS and CMS is the recommended source for these measures in the respective reporting plans. The data sources from which CMS and/or its data vendor create the nursing home and home health measures are the Nursing Home Minimum Dataset (MDS) and the Outcomes Assessment Standard Information Set (OASIS), respectively. The Massachusetts Department of Public Health serves as the data collector and submitter for both data sets for MA-based providers. Both data sets contain patient race and ethnicity data.

**It is recommended that in 2011 the DHCFP or its Analytic Consultant, MHQP, explore the feasibility of obtaining either provider-level performance measures by race/ethnicity or pre-calculated, de-identified person level measure results, including each person's race and ethnicity, from CMS or its data vendor.** DHCFP and MHQP should also explore how the nursing home and/or home health measures could be calculated and stratified by race and ethnicity using either a person-level file from CMS or the data sets currently held by MA DPH.



Racial and ethnic disparities in access to organ transplants have been documented in the literature. The volume of candidates for organ transplantation by race and ethnicity may be too low to report for some types of organ transplants. However, kidney disease is a priority condition and is more common among some racial/ethnic minority groups, especially blacks, than whites. Liver transplants are also worth evaluating.

Organ transplant centers report data on candidates for organ transplant to the Scientific Registry of Transplant Recipients (SRTR). Data are also collected by the United Network for Organ Sharing (UNOS). Both organizations provide data to the US Health Resources and Services Administration (HRSA) where it is compiled into annual reports for public reporting by HRSA. According to the HRSA annual report for 2007, the large majority (61.6%) of candidates for a kidney transplant nationally at the end of 2006 were non-white patients. Thirty-four percent were black. SRTR publishes data on the performance of individual transplant centers on their website. Some of these data are available by race and Hispanic ethnicity, though not all of the outcomes are broken out this way. Given the relatively small number of organ transplant centers in Massachusetts it may be possible to calculate some of those outcome measures by race/ethnicity from data in existing reports. This should be explored further in 2010.

Quality measures for assisted reproductive therapy (ART) centers are collected in a patient registry managed by the Society for Assisted Reproductive Therapy (SART). SART reports on these measures to the US Centers for Disease Control (CDC) and also publicly reports on selected measures on their website. ART is not an area for which disparities have been documented to date. The availability of published data on the percentage of patients receiving ART by race/ethnicity is unknown at this time and could be explored in 2011. At this point, measures of ART by race and ethnicity are considered a low priority and it is recommended that further exploration be deferred pending data on the prevalence of ART among different racial/ethnic groups and/or data on access to ART among patients with an outpatient diagnosis reflecting a problem with conception.

Quality measures for hospice providers are still evolving and their availability by race and ethnicity is unknown at this time. However, there is strong evidence that disparities exist in use of hospice and in end of life treatments. This should be explored in 2011.

Table 5 shows the anticipated status of data on disparities for all priority conditions in each reporting year.

**Table 5: Status of Reporting by Race and Ethnicity (R/E) by Reporting Plan**

Care Setting	Measures are Currently Available by R/E	Data are Currently Available to Calculate Measure by R/E in 2011	Data will be Available to Calculate Measures by R/E in 2011	Data Should be Available to Calculate Measures by R/E in 2012	Data Will Not be Available to Calculate Measures by R/E until 2013 or Later	Unknown at this Time	Not Applicable (facility-level measures)
Inpatient Hospitals	<ul style="list-style-type: none"> <li>MA DPH HAls</li> <li>MA DPH SREs</li> <li>MA DPH Births</li> </ul>	<ul style="list-style-type: none"> <li>AHRQ Volume</li> <li>AHRQ Mortality</li> <li>Leapfrog Clinical</li> <li>Leapfrog Evidence-based</li> <li>Hospital Referral</li> </ul>		<ul style="list-style-type: none"> <li>Mass-DAC Cardiac Outcomes</li> <li>National Hospital Quality Measures from CMS—Hospital Compare</li> </ul>		<ul style="list-style-type: none"> <li>HCAHPS-Patient Experience</li> <li>National Hospital Quality Measures from the Joint Commission</li> </ul>	<ul style="list-style-type: none"> <li>Leapfrog Leaps</li> <li>Safety Culture, CPOE, IPS</li> </ul>
Medical Groups			Patient Experience	HEDIS Clinical	Other Clinical Measures from QCC Dataset		HIT Measures
Nursing Homes				Nursing Home Compare			DPH Survey Measures
Transplant Centers			<ul style="list-style-type: none"> <li>SRTR</li> <li>UNOS</li> </ul>				
Dialysis Centers						<ul style="list-style-type: none"> <li>Dialysis Compare</li> <li>CMS/ESRD</li> </ul>	
ART Centers			SART				
Home Health Care				Home Health Compare			
Hospice Care							

## **F. Future Reporting Plans: Care Transitions and Hospital-wide Mortality**

One area identified as a national priority for quality measurement and recommended for reporting in 2013 or beyond is measures of continuity and coordination of care, collectively referred to as care transitions. The reason for deferring this area for now is the initial focus on care within various care settings and for priority conditions rather than care across settings or conditions. Another reason is the relative paucity of publicly reported measures on most types of care transitions. However, new measures are being developed in this area, existing measures are increasingly being implemented and public reporting has begun to emerge in some areas.

Indeed, several quality measures currently recommended for reporting in 2010 reflect care transitions. In particular, there are measures of patient experiences with care in a given setting that focus on the patient's preparedness to thrive in the next setting and measures that explore whether a provider in a given setting was informed about or involved in care delivered in another setting. Examples include the HCAHPS measures of adequacy of discharge instructions and the Physician Office-based Patient Experience Survey measures of a primary care physician's involvement with and/or knowledge of specialist care received by the patient. Examples of measures of coordination of care may be found among measures for specific priority conditions and for patient safety (e.g. monitoring of patients on persistent medications). The readmission rate measures currently being validated by DHCFP are obvious candidates for reporting on transitions in care. Readmission rate measures for the Medicare population are already being publicly reported by CMS and could be included in a technical report on care transitions. To the extent that the Council would like to see all of the current measures that reflect care transitions organized into a single report with gaps and priority areas identified, this could be accomplished through the development of this report by the DHCFP or under contract to MHQP for posting on the Council's administrative website in 2011.

Another area of great interest is that of hospital-wide mortality, rather than condition or procedure specific mortality rates. The Patient Safety Committee is managing a project to evaluate and recommend one or more valid and reliable measures of hospital-wide mortality that can be used for both quality improvement and public reporting on the QCC website. The Patient Safety Committee and the researchers they have engaged have developed criteria to select the measures, and have selected vendors to submit measures to be evaluated. They will select pilot hospitals and conduct comparisons of the different vendor methodologies. They plan to present evaluation results and recommendations to the QCC in December of 2009, with likely public reporting on the Council's administrative site in July of 2010. These measures then can be considered for the consumer MyHealthCareOptions site in subsequent years.